DOCUMENT RESUME

ED 446 743 IR 020 372

TITLE	e-Learning--Designing Tomorrow's Education. Communication from the Commission.
INSTITUTION	Commission of the European Communities, Brussels (Belgium).
PUB DATE	2000-00-00
NOTE	14p.
PUB TYPE	Reports - Descriptive (141)
EDRS PRICE	MF01/PC01 Plus Postage.
DESCRIPTORS	Computer Assisted Instruction; *Educational Development; *Educational Technology; Foreign Countries; Information Technology; Online Systems; *Technological Advancement
IDENTIFIERS	*Europe; European Communities Commission; European Union; Technology Implementation; *Technology Integration

ABSTRACT

At the Lisbon European Council held on March 23 and 24, 2000, a goal was set for the European Union "to become the most competitive and dynamic knowledge-driven economy in the world, capable of sustainable economic growth with more and better jobs and greater social cohesion." The eLearning initiative proposed by the Commission of the European Communities to attain the goals set by the Lisbon European Council is designed to mobilize the education and training communities, along with the economic, social and cultural players concerned, to enable Europe to catch up and accelerate the introduction of the knowledge-based society. The first section of this paper outlines reasons why Europe must act quickly in integrating technology use at all levels of education, training and research. The second section outlines European objectives for infrastructures, for increasing people's level of knowledge, and for adapting education and training systems to the knowledge-based society. The third section outlines the four main lines of action on which the eLearning initiative is based. The fourth section focuses on the framework for implementation of eLearning. (AEF)

Reproductions supplied by EDRS are the best that can be made
from the original document.

ED 446 743

COMMISSION OF THE EUROPEAN COMMUNITIES

Brussels, 24.5.2000
COM(2000) 318 final

COMMUNICATION FROM THE COMMISSION

e-Learning – Designing tomorrow's education

PERMISSION TO REPRODUCE AND DISSEMINATE THIS MATERIAL HAS BEEN GRANTED BY

H.C. Jones

TO THE EDUCATIONAL RESOURCES INFORMATION CENTER (ERIC)

U.S. DEPARTMENT OF EDUCATION
Office of Educational Research and Improvement
EDUCATIONAL RESOURCES INFORMATION CENTER (ERIC)

■ This document has been reproduced as received from the person or organization originating it.

□ Minor changes have been made to improve reproduction quality.

• Points of view or opinions stated in this document do not necessarily represent official OERI position or policy.

IR020372

BEST COPY AVAILABLE

TABLE OF CONTENTS

Introduction 3

1. Why Europe must act quickly 5

2. Ambitious objectives for Europe 6

Objectives for infrastructures: 6

Objectives for increasing people's level of knowledge: 6

Objectives for adapting education and training systems to the knowledge-based society: 7

3. eLearning, four main lines of action for the knowledge-based society 7

3.1. Equipment 7

3.2. Training at all levels 8

3.3. The development of good quality multimedia services and contents 8

3.4. The development and networking of centres for acquiring knowledge 9

4. The framework for implementation 9

4.1. *e*Learning: implementation by the Member States 9

4.2. *e*Learning, the Community framework of support 10

Conclusion 13

INTRODUCTION

At the **Lisbon European Council** held on 23 and 24 March 2000, the Heads and State and Government acknowledged that *"the European Union is confronted with a quantum leap stemming from globalisation and the new knowledge-driven economy"* and set the Union a **major strategic goal**: *"to become the most competitive and dynamic knowledge-driven economy in the world, capable of sustainable economic growth with more and better jobs and greater social cohesion"*.

Attaining this goal presupposes **the committed involvement of all the players involved** in education and training. This means vast numbers of people: 81 million of the European Union's 117 million people aged under 25 attend school, 5 million teachers are involved, added to whom must be considered several million people in training. The fact is that in the future a society's economic and social performance will increasingly be determined by the extent to which its citizens, and its economic and social forces can use the potential of these new technologies, how efficiently they incorporate them into the economy and build up a knowledge-based society. Against this background, **the stepping up of the education and training drive** in the European Union – in order to successfully assimilate the digital technologies and use them to best effect – is a **precondition to the success** of the Lisbon European Council's goals.

The first and most urgent of these goals is to quickly exploit the opportunities of the new economy and in particular the Internet. To achieve this, the Heads of State and Government invited the Council and the Commission to draw up *"...a comprehensive eEurope Action Plan .... using an open method of coordination based on the benchmarking of national initiatives, combined with the Commission's recent eEurope initiative as well as its Communication 'Strategies for jobs in the Information Society'."*

The *e*Europe Action Plan, developed as a result, brings together a number of **strategic action** areas, and defines for each of them the challenges and the proposed answers. Two of these action areas, *"European Youth into the Digital Era"* and *"Faster Internet for researchers and students"* address specifically education; three others are closely related with vocational training and lifelong learning.

The Lisbon Council's conclusions attach particular importance to "*Education and training for living and working in the knowledge society*". For this key area of the **European social model**, the Lisbon conclusions define a comprehensive series of targets and request the Education Council to undertake a general reflection on the **concrete future objectives of education systems**, focusing on common concerns and priorities.

The *e*Learning initiative has been developed in this context. *e*Learning does not open new or parallel processes, nor does it duplicate other initiatives. ***e*Learning brings together** the different education components of ***e*Europe** actions, of the employment guidelines of the **Luxembourg process** and in other Community actions, such as, for example, research, to ensure their global **coherence** and their **effective presentation** to the **education world**. Finally, *e*Learning will contribute an important element to the **general reflection** requested by the Council : the effective integration of ICT in education and training.

***e*Learning** seeks to mobilise the educational and cultural communities, as well as the economic and social players in Europe, in order to speed up changes in the education and training systems for Europe's move to a knowledge-based society.

The first essential stage in this move is the acquisition by the citizens of Europe of the confident use of the new tools for accessing knowledge and the **widespread development of a 'digital literacy'** – adapted to the different learning contexts and target groups. Just as the industrial societies set themselves the aim of ensuring that all citizens were properly versed in the three Rs, the emergence of the knowledge-based society implies that **every citizen must be 'digitally literate'** and basic skills in order to be on a better footing in terms of equal opportunities in a world in which digital functions are proliferating. This is high on the list of priorities if we are to enhance cohesion and employability in our societies as opposed to creating fresh divisions.

Getting the **innovation potential** of the new technologies to work for the requirements of and quality in lifelong training, and for the development of teaching practices, is a major challenge. A new learning environment can be created which favours autonomy, flexibility, decompartmentalisation of subject areas, establishing contacts between centres of culture and knowledge and facilitating access by all citizens to the resources of the knowledge-based society. For Europe, it is an **historic opportunity,** for its citizens can get to know each other's cultures, languages, traditions, creations, and instigate new forms of cooperation in education and culture, thereby bringing a greater density to the cultural and educational area they share.

If we want to adapt and modernise our education and training systems, then any obstacles must be removed quickly in a concerted manner and we have to **urgently focus our energy** at all levels on ambitious approaches and objectives.

The attainment of the new strategic goal set for the Union by the Lisbon European Council and which *"combines competitiveness and social cohesion"* thus implies the implementation of an **overall strategy** within which a major role is given to the **educational and cultural communities**, particularly under the European social agenda to be adopted at the Nice European Council in December 2000. The aim will be to guarantee access to the information and communication technologies to all those in training; to provide training in the use of these technologies, particularly for learning purposes; to ensure the availability of quality European multimedia services and products; and lastly to encourage all the players involved to commit themselves to the attainment of these goals.

1. WHY EUROPE MUST ACT QUICKLY

All over the world the way is being paved for a new economy and societies are increasingly driven by information and knowledge. Yet although its citizens are amongst the best educated in the world and its education and training systems rank amongst the best in the world, and although it has the necessary investment capacity, Europe has major weaknesses and is well behind the United States in the use of the new information and communication technologies. This affects mainly four areas:

- **The shortfall in hardware and software:** most European countries suffer from a shortfall in terms of hardware and software, affecting schools and universities as well as (public and private) technical training centres and in-company training (particularly the SMEs). In school education, for instance, the situation in primary schools in Europe varies enormously, with divergences ranging from one computer per 400 pupils to one computer per 25 pupils.

- Europe suffers from a worrying **shortage** of **qualified staff**, particularly teachers and trainers with ICT at their fingertips. Over the next five years, one out of every two jobs will depend on these new technologies. The shortage of specialists in the new technologies corresponded to 500 000 jobs in Europe in 1998. Failure to stem this trend would take this figure over the 1.6 million mark in 2002.

- There are no accurate figures available for the number of teachers in Europe who have **real skills** in the new technologies and can fully incorporate them in their work, but they are a minority, even in Europe's most advanced countries.

- Europe produces **too little of the educational multimedia software, products and services** available to serve training and education. In a world market estimated[1] to be worth over two billion dollars in 2000, nearly 80% of online resources today comes from the USA[2]. The European educational multimedia industry is undercapitalised because of the high number of very small firms, while links between education and training systems and the industry are not strong enough to generate viable services which really cater for education and training requirements.

- **The development of an adequate supply of software, contents and services** which are **suitable** for the needs of European society is **a major challenge for Europe**. Can a knowledge-based society take hold in Europe if it is unable to provide its citizens and economic and social players with the contents of this knowledge?

- **The high cost of telecommunications in Europe** is an obstacle to the intensive use of Internet and the spread of digital literacy. Bringing down this cost in Europe, particularly for education and training centres – as has been done in the USA – will determine the speed of the transition to a knowledge-based society.

These considerations require urgent action at all levels in education, training and research, as well as an improved synergy between the respective policies in the fields of education and training and of research.

---

1 Source: IDC (International Data Corporation).

2 Source: Training Resources Observatory.

2. AMBITIOUS OBJECTIVES FOR EUROPE

In order to allow Europe to catch up, to grasp the opportunities offered by the new digital technologies and derive all the benefits in terms of raising people's level of knowledge, enhance its economic competitiveness and create jobs, the **Lisbon European Council**:

- adopted ambitious objectives for adjustments to our education and training systems, part of which are already included in the guidelines of the Luxembourg process;

- called on the "Education" Council to examine future goals for teaching systems in the light of common concerns and priorities and to submit a more comprehensive report to the European Council to be held in the spring of 2001;

- also called upon the Council and the Commission to draw up a comprehensive *e*Europe action plan to be submitted to the June 2000 European Council, applying an open method of co-ordination based on the evaluation of the performance of national initiatives.

In order to strengthen synergy at all levels, the *e*Learning initiative seeks, specifically with regard to education and training, to implement the conclusions of the Lisbon European Council and the employment policy guidelines, and to give tangible expression to and complement the comprehensive *e*Europe action plan.

It will provide overall consistency for the action undertaken in these areas and mobilise all the players concerned around ambitious objectives. It will also help to mobilise research for better targeting of actions in the area of education and lifelong training and learning. It also fits in with the Resolution[3] on multimedia educational software for education and training, which the Commission adopted on 6 May 1996 following a proposal from the Commission.

Objectives for infrastructures:

- provide all schools in the Union with an Internet connection by the end of 2001,

- encourage the creation by the end of 2001 of a trans-European high speed network for specific communications linking research institutes, universities, scientific libraries and, in due course, schools,

- ensure that by the end of 2002 all pupils have a fast Internet connection and multimedia resources in the classroom.

Objectives for increasing people's level of knowledge:

- substantially increase every year the investment per capita in human resources,

- provide each citizen with the skills necessary to live and work in the new information society,

---

[3] OJ C 195 of 6.7. 1996, p. 8. This Resolution helped to focus attention for the first time on what was at stake for Europe and to broadbrush the framework of a common policy. Despite significant process in the 1996-99 period, the challenges are still as numerous as is stressed in detail in the report "Designing tomorrow's education. Promoting innovation with new technologies" – COM (2000) 23 final – and the Communication "Strategy for jobs in the information society" – COM (2000) 48 final.

– enable the population at large to become digitally literate.

Objectives for adapting education and training systems to the knowledge-based society:

– by the end of 2002 train a sufficient number of teachers in the use of Internet and multimedia resources,

– ensure that schools and training centres become local centres for acquiring knowledge which is versatile and accessible to everyone, using the most appropriate methods tailored to the broad diversity of the target groups,

– adopt a European framework to define the new basic skills which lifelong learning must make it possible to acquire: information technologies, foreign languages, technical knowledge, particularly the introduction of a European diploma for basic information technology skills, issued by means of decentralised procedures,

– by the end of the year 2000 define ways of encouraging mobility among students, teachers, trainers and researchers, through the optimal use of Community programmes, by removing obstacles and by increased transparency for the recognition of qualifications and periods of study and training,

– prevent the gap from constantly widening between those who have access to new knowledge and those who do not, by defining priority actions for certain target groups (minorities, the elderly, the disabled, the under-qualified) and women,

– provide pupils with broad digital literacy by the end of the year 2003.

The *e*Learning initiative also aims to bridge the gap between those who have access to the new technologies and those who are excluded from these technologies, by endeavouring to provide all citizens with a solid basic education.

3. ELEARNING, FOUR MAIN LINES OF ACTION FOR THE KNOWLEDGE-BASED SOCIETY

The *e*Learning initiative proposed by the Commission in order to attain the goals set by the Lisbon European Council is designed to mobilise the education and training communities, along with the economic, social and cultural players concerned, in order to enable Europe to catch up and accelerate the introduction of the knowledge-based society.

*e*Learning will strengthen the **partnership between the public and private sectors**, between the players involved in education, training and culture and those in the contents industry. There will be particular focus on co-operation with the economic and social players, particularly the social partners, in implementing the four lines of action.

The *e*Learning initiative is based on four main lines of action:

3.1. Equipment

The efforts here will concentrate on multimedia computers, for the connection and improvement of access to digital networks in the different forums of learning, training and knowledge. *e*Learning emphasises, in line with the Lisbon goals, that high standards are needed in infrastructure quality both from the point of view of access to outside networks and for local networks or Intranets. The ratios of equipment in schools in the European Union

should be 5-15 users per multimedia computer by 2004. In vocational training, it is important to improve access to vocational training centres and by the business sector, particularly the SMEs, to these infrastructures.

There is a need for learning environments tailored to the requirements at all levels of lifelong learning. This implies access to other forums of learning: libraries, cultural centres, museums, etc. Good quality infrastructures must be accessible to the organisations involved in non-formal education and training, e.g. associations and the social partners.

Just as expenditure on hardware is calculated, provision must be made in the planning of infrastructures for calculating expenditure on software, multimedia products and services, particularly for training purposes.

3.2. Training at all levels

*e*Learning is in line with the Lisbon goals in that it emphasises the pedagogical nature of the skills required and the aspects linked to the development and use of the new technologies in learning. The most advanced pilot experiments indeed stress that technology is set to have an impact on organisation and methods, the structure and contents of education and training programmes, and to shape a new learning environment. So the use of the new technologies must be seen in the context of teaching practices. Furthermore, they must be adapted to the different subject areas and contribute to an interdisciplinary approach.

The *e*Learning initiative will contribute to highlighting innovative educational models: new technologies will notably allow for the implementation of new types of relationships between students and teachers.

The training drive must also focus on the development of the skills required to use the new technologies. It must be an integral part of initial and continuing training for each teacher and trainer. The use of autonomous and online learning phases in tandem with teamwork is gaining ground in continuing training.

In the area of **vocational training**, there is a need for in-depth analysis of the qualifications and skills required to give training to apprentices and workers in industry and services in the context of lifelong learning.

A definition will be proposed in this connection for the **basic skills** which lifelong learning must provide, and the skills peculiar to the new occupational profiles.

3.3. The development of good quality multimedia services and contents

If information technologies are to be successfully incorporated into education and training, then relevant and good quality services and contents must be available. The European educational multimedia industry, as well as being undercapitalised, lacks qualified manpower and needs to be strengthened, and closer links need to be established between this industry and the education and training systems. Moreover, the goal is to develop and stimulate a European market for contents and services, which addresses the needs of the education and cultural communities and of European citizens. The involvement of the industry in this respect is essential.

In this new learning environment, pupils and people in general will have access to a wide range of contents and services able to cater for their training or cultural needs. Questions will arise time and again in this context on matters of quality, reliability and usefulness and

recognition of these contents. Quality criteria, methods of academic or vocational evaluation and recognition of contents and levels of training proposed, will need to be established in order to steer teacher and learner alike in the new learning environment.

The development of **vocational guidance services**. The use of the new technologies in training open up numerous possibilities for accessing knowledge and thus makes training provision more complex. By the end of 2002, the capacity of the vocational guidance services should be substantially strengthened so as to allow everyone to access information on initial and continuing training opportunities in the new technologies and on the skills and qualifications required on the jobs market and be able to plot or adjust their training and career pathways.

3.4. The development and networking of centres for acquiring knowledge

The information technologies will give an unprecedented boost to exchange and co-operation in the European educational and cultural area. This presupposes – in line with the Lisbon European Council – transforming teaching and training centres into **centres for acquiring knowledge which are versatile** and accessible to everyone and, of course, equipping them and training their teachers.

Many schools and universities have in recent years begun to build up virtual teaching and learning environments. These virtual forums and campuses have made it possible to network an increasing number of teachers, pupils and tutors. *e*Learning will give a further boost to this movement and will encourage, while fully respecting cultural and language diversity, **the interconnection of virtual spaces and campuses, the networking of universities, schools, training centres and, in addition, cultural resource centres**. This networking must favour the development of exchange of experience, best practice in education and training, and also of distance teaching and training.

4. THE FRAMEWORK FOR IMPLEMENTATION

***e*Learning** will be implemented in conformity with the method advocated by the Lisbon European Council, an open method of co-ordination in line with the principle of subsidiarity, whereby best practice can be disseminated and greater convergence secured with regard to the goals set. This method will require the Member States, the Council and the Commission to take steps in line with their responsibilities and which must make it possible to attain the goals set.

The initiative does not set out to create new processes, but draws upon existing Luxembourg processes in enriching it and deepening it in the fields of education and training.

4.1. *e*Learning: implementation by the Member States

The objectives and priorities adopted by the European Council are accompanied by a specific and tight calendar. Their attainment entails rapid implementation by the Member States and thus for them a solid political commitment and broad acceptance by all the players concerned.

In close conjunction with the Council's Committee on Education, the Commission will prepare a **framework for attaining the goals of *e*Learning**. **Benchmarking** of education and training policy actions will thus be carried out in line with the Lisbon conclusions allowing the European Council to gauge:

- progress made in the attainment of the objectives set;
- the effectiveness of the action taken and policies implemented;
- the dissemination of best practice and the enhancement of joint reflection.

Benchmarking will be carried out at the European level, by using indicators which have been defined in the Luxembourg process and in the e-Europe action plan.

As a complement, and with a view to enabling experts in the field to analyse precisely and appropriately the current evolutions, observation mechanisms will be developed. In this context, targets will be identified – taking into consideration the goals as defined – drawing on the experience gained in the Member States as well as in the major countries, such as the United States and Japan, corresponding to the four lines of action of *e*Learning. These will concern infrastructures, training, contents and services as well as networking. They will be compatible with the indicators defined in the Luxembourg process, which is undergoing revision.

The Commission will periodically present **progress reports on *e*Learning** to the Education Council.

The *e*Learning initiative will constitute a contribution to **revising the guidelines for employment** which the Commission will release in autumn 2000 in the context of the mid-term review of the Luxembourg process. Thus it is envisaged to propose a specific line on the subject of *e*Learning and to define more specific objectives to the second part of the Line n°8 for year 2000. This may help improve employability and adaptability to the jobs market, strengthen lifelong learning and introduce appropriate benchmarking measures.

The *e*Learning initiative will provide favourable conditions for the responsible authorities which are competent in this area, to help them accelerate the adaptation of education and training systems so as to allow all the pupils, students, teachers, trainers and trainees to acquire a true digital culture.

While taking care to avoid duplication and overlapping with other reports, national reports on the extent to which *e*Learning targets have been met in relation to the indicators defined earlier are an essential condition for efficient evaluation by the other Member States and the Commission of the progress made by each Member State in implementing the conclusions of the Lisbon European Council which feature in the *e*Learning initiative.

4.2. *e*Learning, the Community framework of support

The Commission's role is to support the Member States as they implement the *e*Learning initiative and to co-ordinate and strengthen their efforts, e.g. by co-financing certain activities. In October 2000, a Commission working document will comprehensively describe all the actions planned at Community level to support the *e*Learning initiative. The *e*Learning initiative should be integrated into the European Social Agenda to be adopted by the Nice European Council in December 2000.

To support the steps taken locally, regionally and nationally, the Commission, in conjunction with the Member States, will focus the Community instruments and programmes on the attainment of the shared goals. This mobilisation will be concentrated on the following areas:

- Member States will be encouraged to use their allocation as per the **Structural Funds**, in order to support efforts of the *e*Learning, particularly with regard to equipment and the training of teachers and trainers, and to set up multi-use local centres accessible to everyone;

- The contribution of the **Community programmes** in the areas of education, culture and training (Socrates, Leonardo da Vinci, Culture 2000), to develop innovative contents, methods and teaching practices, to organise networking and to step up virtual mobility;

- The contribution of research programmes, as in the area of technology within the IST Programme (Information Society Technologies), as in the area of socio-economic research. (Programme TSER, Targeted Socio-Economic Research). Particular attention will be given to the specific contributions of the IST programme and the TEN-Telecom programme which – in the larger framework of the e Europe initiative – are targeted at making young people enter into the digital age and to promote a rapid Internet access for researchers and students.

- The contribution of those international co-operation programmes which include educational and vocational training parts, such as, for example, the initiatives aimed at EU candidate countries, the MEDA programme for Mediterranean regions or the initiative EUMEDIS which concerns the launch of pilot projects in the domain.

- The contribution of the **Community's financial bodies** (European Investment Bank) in order to strengthen the European industry of multimedia content for education and training.

There will be special focus on:

- the **recognition of qualifications** and periods of study and training, by consolidating the instruments used, e.g. the ECTS (European Credits Transfer System), the qualifications forum, Europass, the ECDL (European Computer Driving Licence), through projects developed under the Socrates and Leonardo da Vinci programmes;

- **language learning**. The "Linguanet Europa" project, for instance, is an opportunity to create a virtual language resource centre for language teachers and the general public;

- **education in communication and the media**. Projects funded in this area to build up teaching resources must be used more extensively and improved in order to develop critical and responsible approaches in the media and the instruments of communication;

- the priority given to the development of the mobility of teachers, students, trainers, researchers, including framework of discussions of the European Research Area .

- the development of **virtual mobility** – distance courses, via the Socrates and Leonardo da Vinci programmes – in order to supplement and extend physical mobility.

Generally speaking, the *e*Learning initiative will exploit and increase the potential of European programmes by defining, testing and validating the **virtual areas** of Socrates (Comenius, Erasmus, Minerva, Lingua, Grundtvig), Youth and Leonardo da Vinci on the

Internet whereby each learner, teacher, trainer, businessman, can find contacts and get descriptions of projects, summaries, material, on the basis of which they can build up their own corpus of knowledge.

The Commission will undertake at the Community level specific actions bringing together the players involved in education, training and culture and thus fuel reflection and action nationally and Community-wide. This particularly concerns:

- **strengthening of the co-operation developed in the framework of the EUN network**[4] (the European Schoolnet) which associates 20 education ministries in the European Union, the EEA countries and countries of central and eastern Europe, and which pursues two principle objectives:
  - the setting up of a virtual and multi-lingual European campus for learning and for co-operation between schools, to act as a gateway to national and regional education networks and to the teaching resource centres associated with them;
  - the development of a European network for innovation and exchange of information on information technologies;
- encouraging the **creation of European gateways** bringing together coherent educational communities. This could be stimulated under the project "The Gateway" on Internet, which is intended to promote easy access to a virtual European education and training area;
- setting up a **general framework for discussion** on innovation in progress, including the creation of a high level group associating the foremost thinkers of the education and economic worlds, with focus on "Designing tomorrow's education and training";
- setting up **observation** mechanisms including the development of prospective scenarios to show decision makers the options available and help them shape their strategy, and the formulation of summaries and conclusions on work in the field and on the basis of the pilot projects at Community level and at national level in the areas of education, training and research;
- setting up a **training network to provide trainers** with expertise in the educational use of technologies; this would enable competent trainers to be trained to cater for present and future education and training requirements, with a view both to the deficit in technical qualifications and to the use of the tools, technologies and teaching approaches needed for other education requirements and for the purposes of "learning to learn". A network of this kind must incorporate the training of trainers, teachers and those in charge of education systems;
- setting up an ***e*Learning Internet site** to stimulate exchange of experience between education establishments, training institutions, between small and big companies, and also across these different forums of learning. This platform should provide better access to all methods linked with the new learning contexts which are emerging and constantly being improved. It is based on the education material developed or being developed under Leonardo da Vinci and Socrates (open and distance learning, Minerva);

---

[4] http: //www.eun.org.

- promoting **employability** by building up qualifications and skills associated with the introduction and use of ICT, and enhancing the potential of lifelong learning;

- stimulating **personal fulfilment and motivation** among "learners" by improving the quality of multimedia materials and the relevance of technologies in order to create synergy between autonomous work and group work, dialogue with the teacher or trainer, distance mentoring, etc.

CONCLUSION

Everyone in Europe will in the very near future have to come to terms with the new information and communication technologies if they are to play an active role in an increasingly knowledge-driven society.

The Lisbon European Council of 23 and 24 March 2000 understood the importance of acting swiftly and makes it a priority to successfully incorporate these technologies in our education and training systems. This is the challenge the *e*Learning initiative aims to meet by proposing that the resources of the relevant Community programmes and instruments be focused on a strategic range of actions to bring a European dimension and added value to local, regional and national initiatives.

If it is to be a complete success, the initiative must be backed up by strong commitment from the Member States, the regions and the private sector, and by a concerted European approach to prepare the education and training of tomorrow.

The goals of *e*Learning are particularly ambitious and require extra effort from most Member States. In return, if these goals are pursued and attained, they will enable the citizens of Europe to take an active part in the construction of the most dynamic and most cohesive society in the world.